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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,123	10/22/2001	Heiko Fibranz	P2000,0257	7092

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EXAMINER

NGUYEN, HAI L

ART UNIT PAPER NUMBER

2816

DATE MAILED: 09/16/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/033,123

Applicant(s)

FIBRANZ ET AL.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4 and 5 is/are rejected.
- 7) ☒ Claim(s) 2,3,6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: on line 13, "storing data in" should be changed to --transferring data into--; and on line 16, "storing the processed data in" should be changed to --transferring the processed data into--. Appropriate correction is required.
2. Claims 6 and 7 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Method for operating of an integrated circuit of claims 6-7 cannot further define the integrated circuit of claim 1.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watt (US 5,579,526) in view of Offord (US 5,522,048).

With regard to claim 1, Watt discloses in Fig.2 an integrated circuit, comprising a synchronous circuit (220); an asynchronous circuit (210); an input register circuit (200) connected to the synchronous circuit and the asynchronous circuit, the input register circuit having a terminal receiving a first control clock signal (230) for controlling data transfer. Fig.2

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of Watt meets all the claimed limitations except for an output register circuit (5 in instant Fig.1) and a sequence controller (6). Offord teaches in Fig.2 a circuit having an output register circuit (210A – 210N) the output register circuit having a terminal receiving a second control clock signal (322) for controlling data transfer; and a sequence controller (250, 216) as recited in the claim. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to utilize that teaching of output register circuit and sequence controller taught by Offord in Fig.2 of Watt for the advantage of robustly transferring data without glitches and minimizing metastability problems.

With regard to claim 4, the sequence controller (250, 216) is contained in the asynchronous circuit.

With regard to claim 5, the above discussed the integrated circuit of the reference meets all of the claimed limitations except for the limitation that a DRAM (8 instant Fig.1) is included in the asynchronous circuit (3). The limitation that "DRAM is included in the asynchronous circuit" is deemed to be intended use, it is noted that the asynchronous circuit of Offord can be comprised many different elements, including the DRAM as well, which is in each case optimally matched to its application.

Allowable Subject Matter

5. Claims 2 and 3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Claims 2-3 would be allowable because the prior art of record does not disclose or suggest an integrated circuit (1 in instant Fig.1), comprising a synchronous circuit (2); an asynchronous circuit (3); an input register circuit (4); an output register circuit (5); and specifically the limitation directed to a terminal for receiving a clock signal (CK); and controllable switch (7) switchably connecting together the terminal for receiving the clock signal and the terminal receiving the first control clock signal (W); the controllable switch being controlled by the sequence controller (6), the sequence controller connected to the asynchronous circuit for generating the first control clock signal and the second control clock signal (C2) in dependence on a duration required for the data to be processed in the asynchronous circuit (3).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bingham et al. (US 4,263,634) is cited as of interest because it discloses a receive buffer for converting synchronous-to-asynchronous data.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 703-306-9178 and Right Fax number is 703-746-3951. The examiner can normally be reached on Monday-Thursday.

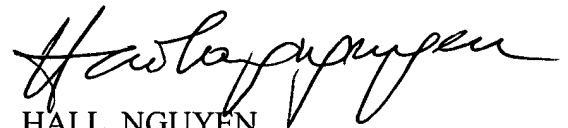
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



HAI L. NGUYEN
PATENT EXAMINER
September 12, 2002